

**ABSTRACT**

The invention includes both devices and methods of production. A device in accordance with the invention includes a top surface and a bottom surface, a through wafer via extending from the top surface to the bottom surface, an optoelectronic structure and an ion implanted isolation moat, wherein the optoelectronic structure and the through wafer via are enclosed within the isolation moat. A method in accordance with the invention is a method of producing a device that includes the steps of forming an optoelectronic structure, forming a through wafer via, extending from a top surface to a bottom surface of the device and forming an ion implanted isolation moat, wherein the through wafer via and the optoelectronic structure are enclosed by the isolation moat.